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PTO/SB/05 (11-00) Approved for use through 10/31/2002, OMB 0651-0032FUS Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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| UTILITY | Attorney Docket No. | | 015389-002990US | | | | |
| PATENT APPLICATION | First In | ventor | | Thomas R. Cech et al. | 9 | | |
| TRANSMITTAL | Title | NOVEL TELO | MERASE | | 601 | | |

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| See MREE | APPLIC | | ADDF | ADDRESS TO Assistant Commissioner for Patents Box Patent Application | | | | | | | |
| | See MPEP chapter 600 concerning design patent application contents. Washington, DC 20231 1. Fee Transmittal Form (e.g. PTO/SB/17) 7. CD-BOM or CD-B in durificate large table or | | | | | | | | | | |
| | | | | | | | | | | | |
| 2. 🗆 | (Submit an original and a duplicate for fee processing) Computer Program (Appendix) Applicant claims small entity status. 8. Nucleotide and/or Amino Acid Sequence Submission | | | | | | | | | | |
| ~ LJ | See 37 CFR 1.27 | | | 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) | | | | | | | |
| з. 🖂 | Specification [Total Pages 66] a. Computer Readable Form (CRF) | | | | | | | | | | |
| 3. 23 | (preferred arrangem | | irayes [00_]] | | ecification Sequ | | | | | | |
| i | - Descriptive title of t | he Invention | | | | | | | | | |
| 1 | - Cross References 1 | to Related Application | | | i. ☐ CD-ROM or CD-R (2 copies); or ii. ⊠ paper number of pages 139 | | | | | | |
| 1 | Statement Regarding | ng Fed sponsored F | R&D | | c. Statements verifying identity of above copies | | | | | | |
| 1 | Reference to seque a computer program | ence listing, a table, | or | | | | | | | | |
| 1 | - Background of the | | | | ACCOMPANYING APPLICATIONS PARTS | | | | | | |
| 4 | - Brief Summary of ti | he Invention | | 9. | Assignment P | apers (cove | er sheet & document(s)) | | | | |
| 4 | - Brief Description of | the Drawings (if file | 9d) | 10. | 37 C.F.R.§3.7 | | | | | | |
| | - Detailed Description | n | | 1 | (when there is | | | | | | |
| | - Claim(s) - Abstract of the Disc | docum | | 1 - | • | - | | | | | |
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| 4. 🛛 | Drawing(s) (35 U.5 | S.C.113) [Total | al Sheets 82 | 12. 🔯 | Information Dis | sclosure | Copies of IDS | | | | |
| 5 Ooth o | r Declaration | | al Pages 7 | 1 | Statement (ID: | | | | | | |
| | Newly executed | | | 13. 🖂 | Preliminary Ar | nendment | | | | | |
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| 128 | Signed statement | attached deleting in | ventor(s) | 16 🖂 | 16. Nonpublication Request under 35 U.S.C. | | | | | | |
| ink | named in the pho | r application, see 37 | CFR | 1 | 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 | | | | | | |
| | 1.05(0)(2) and 1.05(0). | | | | | | | | | | |
| 6. 🔯 Ar | oplication Data She | et. See 37 CFR | 1.76 | 17. | | | | | | | |
| | | | | 1 | Listing Under: | 37 CFR 1.8 | 21(e) | | | | |
| 18. If a CO | | | | | | | | | | | |
| | optication Data Shee | | | | | | • | | | | |
| ⊠ Con | ☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: 99 / 843,676 | | | | | | | | | | |
| | pplication information | | To be assigned | | 1 | Group Art Un | it: 1646 | | | | |
| For CONTI | For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an eath or declaration is supplied | | | | | | | | | | |
| l under Box | under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts. | | | | | | | | | | |
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| Name (F | Print/Type) | Hugh Wang | | Registratio | n No. (Attorney/ | Agent) | 47,163 | | | | |
| Signatur | е | It. | Uler | 3 | | Date | January 18, 2002 | | | | |

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| for FV 2001 | | Application Number | To be assigned | | | | | |
| | | Filing Date | January 18,2002 | | | | | |
| | | First Named Inventor | Thomas R. Cech et al. | | | | | |
| Patent fees are subject to annual revision. | | Examiner Name | To be assigned | | | | | |
| | | Group Art Unit | To be assigned | | | | | |
| AL AMOUNT OF PAYMENT | (\$) 740 | Attorney Docket No. | 015389-002990US | , | | | | |

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| METHOD OF PAYMENT | | | | | <u> </u> | FEE CALCULATION (continued) 3. ADDITIONAL FEES | | | ALCULATION (continued) | | | |
| The Commissioner is hereby authorized to charge indicated fees and credit any over payments to: | | | | 1 | ITIONAL Entity | | Entity | | | | | |
| Deposit Account | | | | Large Fee Code | Fee (\$) | Fee Code | Fee (\$) | Fee Description | Fee Paid | | | |
| Number 20-1430 | | | | 105 | 130 | 205 | 65 | Surcharge - late filing fee or oath | | | | |
| | | | | | | 127 | 50 | 227 | 25 | Surcharge - late provisional filing fee or cover sheet. | | |
| Deposit Account Townsend and Townsend and Crew LLP | | | | | 139 | 130 | 139 | 130 | Non-English specification | | | |
| Name | | L | | | | | 147 | 2,520 | 147 | 2,520 | For filing a request for reexamination | |
| Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 | | | | | 112 | 920* | 112 | 920* | Requesting publication of SIR prior to Examiner action | | | |
| See | 37 CF | | | status. | | | 113 | 1,840* | 113 | 1,840* | Requesting publication of SIR after Examiner action | |
| 2. 🔲 Pa | ymen | t Enclos | ed: | | | | 115 | 110 | 215 | 55 | Extension for reply within first month | |
| ☐ Chec | k | ☐ Cred | it card | Money Order | ☐ Other | | 116 | 400 | 216 | 200 | Extension for reply within second month | |
| | | | | | | _ | 117 | 920 | 217 | 460 | Extension for reply within third month | |
| 1. BASI | IC FIL | NG FEE | | CULATION | | | 118 | 1,440 | 218 | 720 | Extension for reply within fourth month | |
| Large Ent | tity S | mall E | ntity | | | | 128 | 1,980 | 228 | 980 | Extension for reply within fifth month | |
| Fee Fee | F | ee F | ee F | ee Description | | | 119 | 320 | 219 | 160 | Notice of Appeal | |
| Code (\$) | | ode (\$ | | | Fee Paid | | 120 | 320 | 220 | 160 | Filing a brief in support of an appeal | |
| 101 740 | _ | | | tility filing fee | 740 | 1 | 121 | 280 | 221 | 140 | Request for oral hearing | |
| 106 330 107 510 | | | | esign filing fee fant filing fee | | 1 | 138 | 1,510 | 138 | 1,510 | Petition to institute a public use proceeding | |
| 108 740 | 20 | 08 3 | 70 R | eissue filing fe | , | 1 | 140 | 110 | 240 | 55 | Petition to revive - unavoidable | |
| 114 160 | 21 | 14 8 | 0 P | rovisional filing | fee | 7 | 141 | 1,280 | 241 | 640 | Petition to revive - unintentional | |
| | | | | 142 | 1,280 | 242 | 640 | Utility issue fee (or reissue) | | | | |
| SUBTOTAL (1) (\$)740 | | | | | J | 143 | 460 | 243 | 230 | Design issue fee | | |
| 2. EXTRA C | MIAI | FFFS | | | | | 144 | 620 | 244 | 310 | Plant issue fee | |
| | | | E | xtra Fe | e from Fee | | 122 | 130 | 122 | 130 | Petitions to the Commissioner | |
| Total Claims | 14 |] -20** | = 0 | laims be | ow Paid 18 = \$0 |) | 123 | 50 | 123 | 50 | Petitions related to provisional applications | |
| Independent Claims | 1 | -3** | = 0 | x s | 84 = \$0 | 1 | 126 | 180 | 126 | 180 | Submission of Information Disclosure Stmt | |
| Multiple Dependent | | -1 | | ×[_ | | j | 581 | 40 | 581 | 40 | Recording each patent assignment per property (times number of properties) | |
| | | Small | Entity | | | | 146 | 740 | 246 | 370 | Filing a submission after final rejection | |
| | | Fee Code | Fee | Fee Descript | ion | | l | | | | (37 CFR § 1.129(a)) | |
| | | 203 | (\$) 9 | Claims in exc | nee of 20 | | 149 | 740 | 249 | 370 | For each additional invention to be examined (37 CFR § 1.129(b)) | |
| | | 202 | 42 | | daims in excess of 3 | | l | | | | , | |
| | | 204 | 140 | | ndent claim, if not paid | | 179 | 740 | 279 | 370 | Request for Continued Examination (RCE) | |
| 109 8 | | 209 | 42 | | lependent claims over | | 169 900 169 900 Request for expedited examination of a design application | | | | | |
| 110 18 210 9 *** Reissue claims in excess of 20 and over original patent | | | | | Other fee (specify) | | | | | | | |
| SUBTOTAL (2) (\$)0 | | | | | The Commissioner is authorized to charge any additional fees to the above noted Deposit Account. | | | | | | | |
| **or number previously paid, if greater; For Reissues, see above | | | | | *Reduced by Basic Filling Fee Paid SUBTOTAL (3) (\$) | | | | | | | |
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| SUBMITTED BY Complete (if applicable) | | | | | | | |
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| Name (Print/Type) | Hugh Wang | Registration No. (Attorney/Agent) | 47,163 | Telephone | 650-326-2400 | | |
| Signature | J-1 | 11/1 | | Date | January 18, 2002 | | |

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE.

In re application of:

Examiner:

To be assigned

Cech et al.

Art Unit

To be assigned

Application No.: To be assigned

Communication Regarding CRF of Sequence Listing under 37 C.F.R. 1.821(e)

Filed: Herewith

For: NOVEL TELOMERASE

Assistant Commissioner for Patents U. S. Patent and Trademark Office

Washington, D.C. 20231

Sir:

In order to comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, 37 C.F.R. §§ 1.821-1.825, Applicants submit herewith the required paper copy of the Sequence Listing. Applicants request use of the acceptable computer-readable form filed in the parent Application No. 08/854,050 (filed May 9, 1997, now Patent No. 6,261,836; Attorney Docket No.: 015389-002940US) as the computer-readable form for the instant application, pursuant to 37 C.F.R. § 1.821(e). It is understood that the Patent and Trademark Office will make the necessary changes in application number and filing date for the computer-readable form that will be used for the instant application.

Pursuant to 37 C.F.R. 1.821(e), Applicants attest that the paper copy of the Sequence Listing filed herewith is identical to the paper copy and computer readable copy of the sequence listing submitted in the parent Application No. 08/854,050, and introduces no new matter.

Cech et al. Application No.: To be assigned Page 2

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

Hugh Wang Reg. No. 47,163

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834 Tel: (303) 571-4000 Fax: (303) 571-4321 PA 3194164 v1